Abstract

A measurements expert system and method for generating a high-performance measurements software driver. The measurements expert system translates a user's measurement task specification (MTS) specifying a measurement task into a solution, e.g., a run-time specification (RTS), suitable for the user's measurement system. The expert system includes programs for analyzing and validating the received MTS, and for generating the RTS. The RTS is useable to configure measurement devices to perform the measurement task, and to generate a run-time which is executable to perform the specified measurement task. The expert system includes a plurality of experts, e.g., device, channel, timing, reader/writer, control, and streaming experts, etc., each class of which manages different aspects of the MTS. The expert system creates a device expert call tree of associated experts according to the configuration specified by the user, manages the configuration of the MTS, verifies the MTS, and compiles the MTS into the RTS.